

How to install VNC Server on Debian 7

05/07/2014 by namhuy 22 Comments

Even though most people will think Ubuntu is the most popular Linux distribution, but did you know Ubuntu is based on Debian! Interesting fact isn't it. Well I'm going to show you How to install VNC Server on Debian 7 wheezy today. If you are not using Debian but Ubuntu, I have also written How to install VNC Server on Ubuntu 14.04.

Update and Upgrade Debian 7 Wheezy

-Before we start to install or configure anything, we should always update our Debian 7 Wheezy system is up to date

```
$ su -
```

```
# apt-get update; apt-get dist-upgrade -y --force-yes
```

Install GUI on Debian 7 Wheezy

There are several GUIs available for you to choose. Gnome, KDE, Xfce, LXDE ... Take your pick, I have written a tutorial how to Install GUI on debian 7 wheezy which includes most of the popular GUIs available for Debian. Unlike Ubuntu 14.04, gnome seems to work fine over VNC, I have tested gnome session and it works with VNC. It's not I don't like gnome, but I would prefer xfce over gnome since xfce is very light weight and it has what I need for.

-To install xfce on Debian 7 Wheezy

```
# apt-get install xorg xfce4 xfce4-goodies thunar-archive-plugin synaptic gdebi wicd iceweasel
```

Install VNC Server on Debian 7 Wheezy

-Very similar to Ubuntu (since Ubuntu is based on Debian), you only need to use vnc4server package to install VNC Server

```
# apt-get install vnc4server
```

Configure VNC Server to work on Ubuntu 14.04

-You can use any privileged user or root user to login to your VNC Server, but for security reason, I'm going to create vncuser for my VNC Server (you can change vncuser in my tutorial to any user that you would like to use, it can be your existing user)

```
# adduser vncuser
```

-Now set vncuser's password

```
# passwd vncuser
```

-We now switch to vncuser to create some VNC configuration's files.

```
# su - vncuser
```

-With regular or privileged user, start vncserver for vncserver to create its necessary files.

```
$ vncserver
```

-After you started VNC Server, you will be asked to create VNC's password (VNC password can be different or the same password as your user's password)

```
vncuser@namhuy:~$ vncserver
```

You will require a password to access your desktops.

Password:

Verify:

xauth: file /home/vncuser/.Xauthority does not exist

New 'namhuy:1 (vncuser)' desktop is namhuy:1

Creating default startup script /home/vncuser/.vnc/xstartup

Starting applications specified in /home/vncuser/.vnc/xstartup

Log file is /home/vncuser/.vnc/namhuy:1.log

-After VNC Server generated files, we have to kill it in order to configure xstartup file.

```
$ vncserver -kill :1
```

-To modify xstartup file

```
$ cd ~
```

```
$ > .vnc/xstartup
```

```
$ nano .vnc/xstartup
```

With the content

```
#!/bin/sh
```

```
unset SESSION_MANAGER
```

```
unset DBUS_SESSION_BUS_ADDRESS
```

```
startxfce4 &
```

```
[ -x /etc/vnc/xstartup ] && exec /etc/vnc/xstartup
```

```
[ -r $HOME/.Xresources ] && xrdb $HOME/.Xresources
```

```
xsetroot -solid grey
```

```
vncconfig -iconic &
```

If you choose to use other GUIs, replace startxfce4 & accordingly to

Gnome-Desktop Environment

```
gnome-session &
```

KDE-Desktop Environment

```
startkde &
```

MATE-Desktop Environment

```
mate-session &
```

LXDE-Desktop Environment

```
startlxde &
```

Cinnamon-Desktop Environment

```
cinnamon &
```

Openbox-Desktop Environment

```
openbox &
```

Save xstartup when you are done.

-The next step is to create VNC Server startup script. You must do this with root user

```
$ su -
```

```
# nano /etc/init.d/vncserver
```

With the content

```
#!/bin/bash
### BEGIN INIT INFO
# Provides:      tightvncserver
# Required-Start: $syslog
# Required-Stop: $syslog
# Default-Start: 2 3 4 5
# Default-Stop:  0 1 6
# Short-Description: vnc server
# Description: http://www.namhuy.net
#
### END INIT INFO

unset VNCSERVERARGS
VNCSERVERS=""
[ -f /etc/vncserver/vncservers.conf ] && . /etc/vncserver/vncservers.conf
prog="$VNC server"
start() {
. /lib/lsb/init-functions
REQ_USER=$2
echo -n "Starting $prog: "
ulimit -S -c 0 >/dev/null 2>&1
RETVAL=0
for display in ${VNCSERVERS}
do
export USER="${display##*:}"
if test -z "${REQ_USER}" -o "${REQ_USER}" == ${USER} ; then
echo -n "${display} "
unset BASH_ENV ENV
DISP="${display%%:*}"
export VNCUSERARGS="${VNCSERVERARGS[${DISP}]}"
su ${USER} -c "cd ~${USER} && [ -f .vnc/passwd ] && vncserver :${DISP} ${VNCUSERARGS}"
fi
done
}
stop() {
. /lib/lsb/init-functions
REQ_USER=$2
echo -n "Shutting down VNCServer: "
for display in ${VNCSERVERS}
do
export USER="${display##*:}"
if test -z "${REQ_USER}" -o "${REQ_USER}" == ${USER} ; then
echo -n "${display} "
unset BASH_ENV ENV
export USER="${display##*:}"
su ${USER} -c "vncserver -kill :${display%%:*}" >/dev/null 2>&1
fi
done
echo -e "\n"
echo "VNCServer Stopped"
}
```

```

case "$1" in
start)
start $@
;;
stop)
stop $@
;;
restart|reload)
stop $@
sleep 3
start $@
;;
condrestart)
if [ -f /var/lock/subsys/vncserver ]; then
stop $@
sleep 3
start $@
fi
;;
status)
status Xvnc
;;
*)
echo $"Usage: $0 {start|stop|restart|condrestart|status}"
exit 1
esac

```

-Now make vncserver startup script executable
chmod +x /etc/init.d/vncserver

-Save vncserver startup script. The next step is to create VNC Server configuration file in /etc/ directory
mkdir -p /etc/vncserver
nano /etc/vncserver/vncservers.conf

With the content

```

VNCSERVERS="1:vncuser"
VNCSERVERARGS[1]="-geometry 1024x768"

```

The first line VNCSERVERS is to set the user to access VNC server with the VNC port. Number 1 means port 1 or 5901. The VNC port will increase to 2 or 5902 or so if you keep adding user to access your VNC Server.

The second line VNCSERVERARGS is to set screen size for the VNC session. You can change the VNC screen size here to fit your screen.

-The last step is to make VNC Server starts on boot
update-rc.d vncserver defaults 99

-You will see missing LSB information warning, just ignore it. Reboot your Debian 7 system and test out your new VNC Server on Debian 7 Wheezy
reboot

You can login to your remote server via VNC with domain or IP. The VNC port is the port you configured in /etc/vncservers.conf for the specific user.

If you can't access your VNC Server, make sure you allow VNC ports in iptables

```
# iptables -L
```

```
# iptables -A INPUT -m state --state NEW -m tcp -p tcp -m multiport --dports 5901:5903,6001:6003 -j ACCEPT
```

```
# iptables-save
```

-SSH?

you can use this command on your local machine to make a tunnel to your remote ssh/vnc server

```
$ ssh -p 22 -L 5901:127.0.0.1:5901 -N -f -l remoteuser remoteaddress
```

replace *remoteuser* with your user on your remote server, and replace *remoteaddress* with your remote ssh/vnc server. After you used the above command, it will ask you for your ssh password (not vnc password)

The next step is to start vncviewer or xtightvncviewer (<http://www.namhuy.net/3106/install-vnc-server-ubuntu-14-04.html#comment-1179>) on your local machine to connect to your remote vnc server.

```
$ xtightvncviewer 127.0.0.1:5901
```

Yes you will vnc to your localhost or 127.0.0.1 since you already have an opened ssh tunnel from your local machine to your remote ssh/vnc server. This time you should type in your vnc password.

Sample output when I connect to my remote vnc server through ssh tunnel

```
namhuy@namhuy-virtual-machine:~$ xtightvncviewer 127.0.0.1:5901
```

```
Connected to RFB server, using protocol version 3.8
```

```
Performing standard VNC authentication
```

```
Password:
```

```
Authentication successful
```

```
Desktop name "vnc:5901 (vncuser)"
```

```
VNC server default format:
```

```
16 bits per pixel.
```

```
Least significant byte first in each pixel.
```

```
True colour: max red 31 green 63 blue 31, shift red 11 green 5 blue 0
```

```
Warning: Cannot convert string "-*-helvetica-bold-r-*-16-*-*-*-*-*-*" to type FontStruct
```

```
Using default colormap which is TrueColor. Pixel format:
```

```
32 bits per pixel.
```

```
Least significant byte first in each pixel.
```

```
True colour: max red 255 green 255 blue 255, shift red 16 green 8 blue 0
```

```
Same machine: preferring raw encoding
```